

PADAM PALACE, RAMPUR

Shimla, Himachal Pradesh, India



Measure Drawings by Batch 2006-2011
Department of Architecture

06601- Aditya Rahul
06602- Shilpa Kharwal
06603- Shakank Dhiman
06605- Prabhat Shankar Rai
06606- Ratna Ghosh
06607- Nishant Bodh

06608- Ajay Katnari
06609- Heena Hussain
06611- Ashish Dharela
06612- Kuldir Singh
06613- Shashi Kant Singh
06614- Aviral Sharma

06615- Ankita Sood
06617- Harender Sharma
06618- Kshama Dwivedi
06619- Neelesh Tripathi
06620- Yogender Pal Singh
06621- Kuldeep Rabha

06622- Jay Shankar Prasad Pandey
06623- Princy Soni
06624- Nipun Behl
06626- Sagarika Nayak
06627- Timsy Garg
06628- Ashwani Kumar

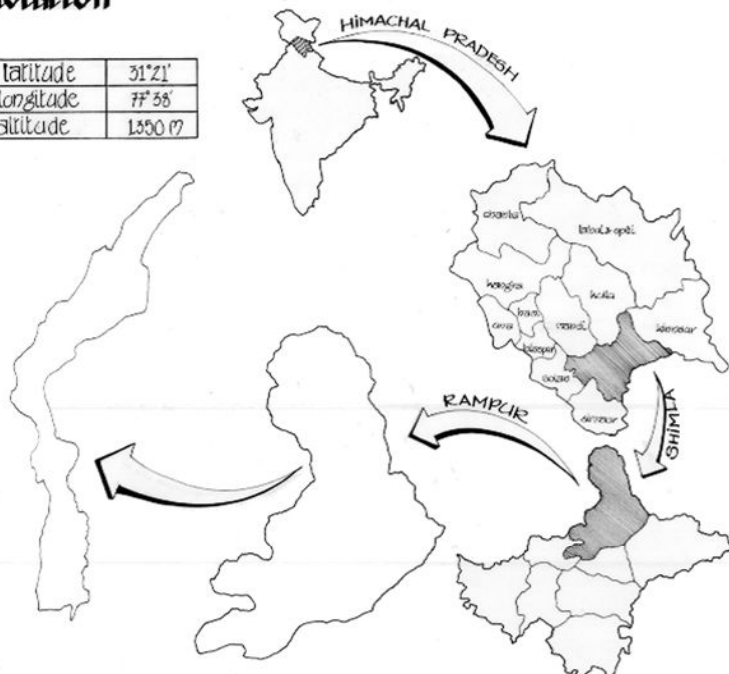


National Institute of Technology
Hamirpur H.P. 177005



location

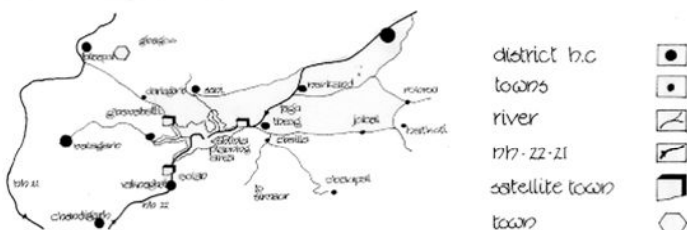
latitude	31°21'
longitude	77°58'
altitude	1350 m



accessibility

road link	distance (kms)	rail link	air link
delhi rampur	430	for broad gauge valka is nearest station	jubbarhatti is nearest airport at shimla, 150 km from rampur
chandigarh rampur	222	for narrow gauge shimla is nearest station	shimla is nearest airport at 5 km from rampur
shimla rampur	130		

regional linkage



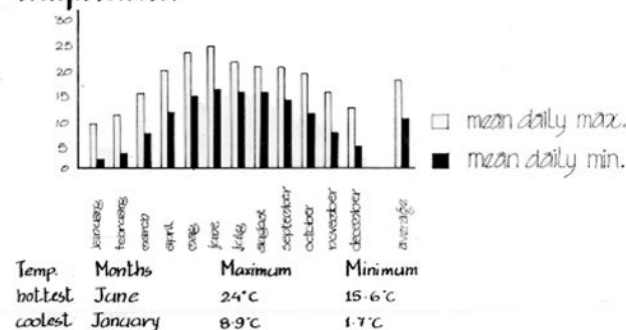
meteorology

	Temperature (°C)		Relative humidity (%)		Rainfall (mm)	No. of Rainy days
	mean daily (max)	mean daily (min)	08:30 hrs	17:30 hrs		
January	8.9	1.7	51	64	54.6	4.7
February	10.6	3.0	48	49	47.2	4.1
March	14.3	6.8	38	50	54.4	5.2
April	17.4	11.1	35	40	41.1	3.6
May	22.9	14.2	36	38	56.4	4.6
June	24.1	15.6	58	58	175.6	10.3
July	21.0	15.0	86	86	316.5	18.3
August	20.2	14.8	88	91	335.1	18.1
September	20.1	13.4	76	84	110.2	9.9
October	18.7	10.7	48	65	46.2	2.9
November	15.1	7.0	36	57	13.8	1.3
December	12.0	4.3	36	56	16.0	1.8
Total					1424.8	84.3
Average	17.3	9.8	5.3	62		

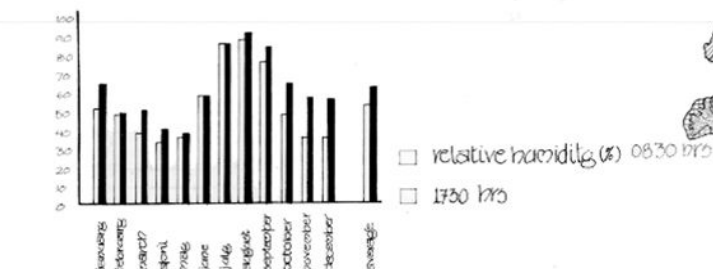
seasons

Winter	Dec-March
Summer	April-June
Monsoon	July-Mid-September
Post Monsoon	Mid-September-Nov.

temperature

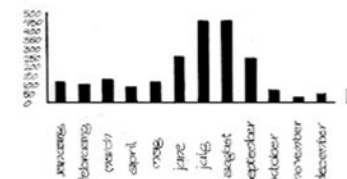


humidity

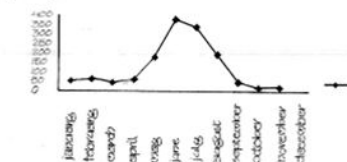


humidity is lowest during summer - 36%
highest during the month of August - 91%

no. of rainy days

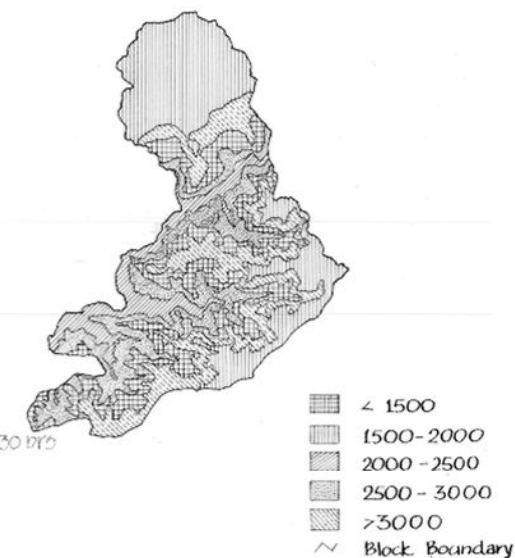


rainfall



60/-70% rainfall reviewed in monsoon
no. of rainy days in a year - 84.8
cloud cover during July and August.

topography



seismology

rampur lies in the lower himalayas which are seismologically active as per the seismic zoning map of india (I.S.: 1843-2002)

the entire rampur area falls in zone four

the list of major earthquake which have occurred within 250 km from rampur in history

date of occurrence	epicentre		magnitude on richter scale
	Latitude (°N)	Longitude (°E)	
5. 3. 1842	30	78	6.5
16. 6. 1902	31	79	6.0
13. 6. 1906	31	79	6.0
28. 2. 1908	32	77	7.0
20. 10. 1937	31.1	78	6.0
12. 5. 1939	32.5	78	6.5
22. 6. 1945	32.8	76.9	6.5
10. 6. 1947	32.6	75.9	6.0
27. 6. 1955	32.5	78.5	6.0
12. 4. 1963	32	78.79	6.0
19. 1. 1975	32.35	78.76	6.8
20. 10. 1991	30.75	78.86	6.6

himachal pradesh can be distinguished into two seismic zones

- 1) himachal upper seismic zone (husz)
- 2) himachal lower seismic zone (hlsz)

the lateral boundary of these zones is through blocks namely chamba, kangra and shimla

the rampur is located in shimla block which bounded on west by sandemagar fault and east by kaurik fault

the various seismic, tectonic features which affect the seismicity of rampur are

- 1) main central thrust
- 2) kaurik fault
- 3) rampur fault
- 4) main bounding fault
- 5) foothill thrust

the continuous seismic activity of the himalayas located in the area situated in the intersection of these transverse features



vegetation

the vegetation type observed in rampur are mainly dependent on precipitation and humidity

local people use forest for their purpose such as firewood and material of construction

based on climatic condition of satluj basin following types of forests are found

- 1) northern mixed deciduous forest

the forest are largely shrubs type, but quality improves slightly in depression, shade and in gorges important trees are: lamna grandis, cedrela toona, albizzia lebeck

- 2) khair sissoo forest

these forest are found on gravelly and sandloam soil

siccacia catechus, dalbergia dasco are its important trees

- 3) himalayan sub-tropical pine forest

this type of forest is observed between elevations 1000 to 2000 mts. overlapping the tropical deciduous forest at lower elevations and giving way to temperate forest at higher elevation main species is pinus roxburghii

- 4) ban-oak forest

this type of forest varies from 1500 to 2100 mts

it overlaps the altitudinal zones of all lower coniferous trees

commonly found species are blue pine, deodar and ban oak



Cedrela toona: a species of our deciduous forest



pinus roxburghii local pine tree



'Deodar' abundantly found in himachal region

Snow leopard the state animal of himachal pradesh



Himalayan partridge known as 'the monal'



satluj river also known as satluj, shataduri and red river (due to its disastrous history)

its source is lake rakashtal in tibet, near mount kailash and it flows south west first entering india through shipki-la pass in himachal then to pakistan

many hydroelectric projects are built on it, such as bhakra-nangal, nathpa-jhakri, karcham-wagtoo

natural calamities

natural calamities often occur in surrounding of rampur, the main reason for this: cloud bursting, successive raining and landslide

some of the recent calamities are:

- 1) nathpa tragedy (1993)
- 2) andha khud tragedy (1997)
- 3) mount kailash tragedy (2000)
- 4) satluj tragedy (august 2000)



Bridge collapsed during satluj flood (2000)

introduction

the name 'bushar' is derived from the name of local devta 'vish har'

bushar state was further divided into three sub-divisions

chuni rohra rampur

rampur lies on the famous trade route between india and china



State Emblem of Bushar State

political history

the state of bushar was established by the kings of rajputana chandravanshi dynasty.

according to the myths, banasur the 61st king of the dynasty was defeated by lord krishna as mentioned in bhagwat gita

lord krishna made his son praduma as next successor and ruler of bushar state



Sketch describing scene between Lord Krishna and Banasur

till maharaja bhup singh's reign, the capital was sarahan which was later changed due to extreme cold conditions

112th maharaja maharaja halgan singh shifted the capital to halganpur, a small place on the bank of river sat-luj around five kilometre from rampur

the 116th maharaja, he shifted the capital to rampur to solve the problem of drinking water

the 113th maharaja, maharaja kehar singh was influential, he was designated with the 'chhatrapati' by emperor of india

he also issued his coins each worth twelve annas



Sketch of ruins of Bushar state in the reign of maharaja kamsingh

development of public amenities

during the reign of maharaja padam singh bahadur maximum development took place

three schools were opened in bushar state

1) middle school in rampur in 1918

2) primary school in kalpa

3) middle school in 1942

municipal committee of rampur was built by the state in 1932



Perspective view of M.O. office

kunwar jageet was the first chairman of mc

this was the first mc in north himalayan region

its function includes cleaning pathways, street lighting by oil lamps and water supply

in past the medium of travelling was horse and mules

first bus arrived in 1956, it took a total time of 12 hours to complete the journey from rampur to shimla

a co-operative society was also built by the state in 1936, which provided books, pens, pencils etc to the students at a membership fees of one anna

state had its own telephone exchange which runs on dng, cell batteries and only served rampur and sarahan

state had its own treasury, printing press, police and jail

judiciary system of bushar state



Local bus stand, Rampur bushar

development of architecture

temple were the initial public buildings

temples and buddhist monasteries were constructed

agrodhyamath temple is the oldest construction in rampur

dhank monastery, beialda was built in 1940 for buddhist followers

afterward the palace 'nonaak' (old palace) was built, now used as public building

other temples were raghunath temple, narasingh temple and math dungir budh, which has a large prayer wheel and hold important scriphine

padam palace is the most influenced example of architecture in rampur which is about 83 years old, built during 1914-1925

it was designed by birchand sukla, housed raja padam singh of bushar kingdom



Narasingh temple, Rampur, Bushar



View of Durginbuth math at Rampur

it is a two storey building made of timber and stone, stone arches dominated the lower floors while woodwork in upper floor for king

the stone used was quarried from khammeri and timber was brought from the jungle of masnih

black gram paste was used for binding stone blocks

at one end of the plan stands 'machkandi', a master piece in woodwork which was used for the seating of royal family especially women



'Machkandi' Seating place for the royal family

Social

Rampur, the former capital of Jharkhand state, enjoys a mixed culture, as forementioned

however the natives still practice agriculture and trade, in the contemporary style, involving modern techniques and methodology,

trading has always and even today, majorly comprises of dry fruits and apples with the difference in the scope of trade, which is expanding throughout the international market

this has also lead them toward more and exposure, with them being able to increase their standard of living and also them to afford good education within and abroad



People selling woolen products in 'International' 'Lovey fair'

due to the establishment of hydroelectric projects like Nalpa Jhakri and Bhalohangar within fifty kilometre radius of Rampur, optimum work opportunities are created that attracts the outflow of maximum natives and hence acts as a prime cause for the preservation of social culture

the place is also linked to various other potential places like Kalla, Shimla as also to Tibet



Electricity tower of H.P.S.E.P. near Nalpa Jhakri

the NH-22 is the prime axis to Rampur built by the H.P.G.W.D. as such, trading and tourism has achieved new heights

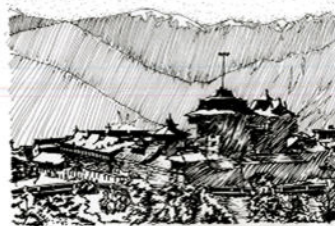
the H.P. Government has played a pivotal role in the fast development by constructing various public buildings, schools, hospitals, secretariat etc. that employs the local population



Engineering corridor 'Taranda Pass' which links Rampur to Kinnaur

the availability of the traditional pahari and tibetan commodities at a reasonable rate which makes it a hotspot for shopping by the tourist

in fact, the tourism industry here employs many localities, since the major tourist junctions of Himachal like Sarahan, Kinnaur, Sangla valley, and Barkanda be in its vicinity



Holy shrine 'Bhionkaali temple' at Sarahan



Scenic view of world famous 'Sangla valley'

Culture

the noticeable feature here is the loyalty of the masses towards the royal family, even after the establishment of political system

this is the biggest factor for preserving the historical background of the place

the people speak pahari and kinnauri and are essentially vegetarians

a major part of their diet consists of fruits and dry fruits bada, patroda and siggola are some of the delicious dishes of Rampur, due to tibetan residents tibetan food like nomos and thupka are also popular

apart from the education working and elite class of people also engage themselves in handicrafts like baskets, caps, pashmina shawls and wooden items

they dress according to the season which mainly consists of dhattu, rachta and goda for females and sada, kameez and pagama for males



Local people enjoying 'dhar' at marriage



A localite with traditional himachali dress

hati the traditional folk dance is performed on all special occasions along with the folk music

the culture has evolved from being completely 'pahadi' to being one of the cosmopolitan towns with a historical background



People enjoying their folk dance 'hati'

religious context

hinduism is the main religion of rampur bishar

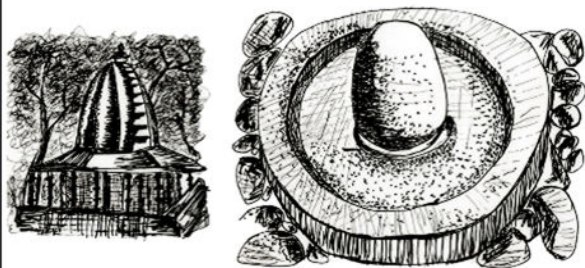
buddhism is also practised by some people

rampur bishar has many hindu temples and one monastery

the town of rampur at present has about a dozen of ancient temples, some of them date between 15th to 18th century

most of these temples are constructed in nagara style and built of dressed sandstone

s.no.	name of temple	year
1.	hanuman mandir	100 year old
2.	narsingh dera mandir	500 year old
3.	radha krishna mandir	500 year old
4.	chowdha kala mandir	400 year old
5.	mahesha madini mandir	8 year old



mythical context

rampur region has many religious myths, e.g. behind mela which takes place after 7-8 years in surrounding area of rampur bishar, is made to happen for the welfare of society, as saroon-ding area in which nar-bali used to give in ancient time



masks

most typical and indigenous form of art in himachal lies in the masks

these masks represents their religious and supernatural beliefs

one of the reason for popularity of masks is stated to be poor villages which were unable to afford the costly idols and so could commission a mask, representing fall of their god and goddess

with the passage of time, mask become mending and then mask were made of copper, gold and silver instead of wood

these masks are carried in palshi in place of god and goddess when the village devi (goddess) and devta (god) has to be taken out of the village for fair, worship in other places



scientific & technological

science and technology has shown its impact on rampur bishar

earlier in ancient times people used to cross river-satluj by rope or by swimming but now after using science and technology 3 bridges have been constructed



with the help of new techniques every village of rampur bishar is connected with road and every house with electricity

several hydroelectric projects are constructed near rampur region

physical

as it was capital of bishar state, palace is the main building of the area and some other buildings such as sdn complex, police complex which were also the royal property

padam palace has courtyard plan which is known as chowki style in local language

it has stone structure in ground floor and first floor is made of deodar wood

till mid of twentieth century, houses and other buildings were made of dry stone wall but with availability of new construction materials, rc framed structures, aluminium and steel frame door and window are used

earlier houses were of g+1 floor only and sloping roof made up of slates were used, now new houses are of g+3 floor and public buildings like municipal committee have g+4 floors

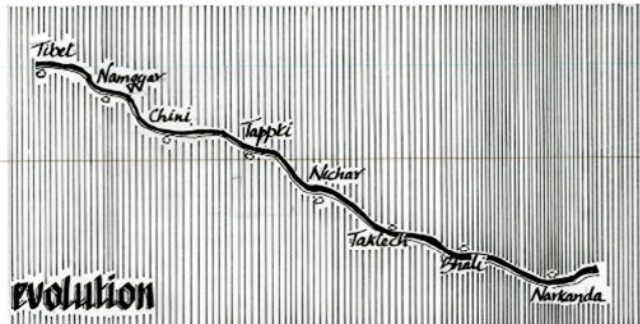
houses are in clustered form properly connected through pathways



Why Rampur?

situated in the focal point of trade route between India and Tibet, Rampur is one of the few towns that has managed to maintain a crucial balance between preservation of its historic importance and the advent of technological advancement at the same time.

majorly it is the judicious and hence effective use of vulnerable resources available there that makes it an urban historic town, as it stands today.

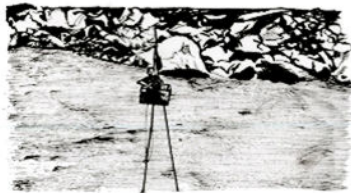


Evolution

the earliest data available dates back to 19th century under the reign of maharaja rasesingh when the place had a distinctive character than today.

the satluj, the river that drains the city was at a higher level and the settlement were along it.

the places of main interest like the palace and the aggar-ganath temple were placed on the highest point.



View of Satluj river

'Aggar Ganath temple'
oldest temple in Rampur



the major stages Rampur evolved in through were:

Tibetan intervention:

trade with Tibet flourished in the 18th century, bringing with itself, an epoch of cultural exchanges that reflects till today in every realm of time, be it in food, clothing, religion or handicrafts. it in fact, was the passage through which Buddhism came and established itself in the region. then they shared common interests to the extent that eventually a treaty was signed between Tibet and India stating that they would continue with the trade till the time Satljaj would gash, unfortunately with invasion of China it discontinued.

English intervention:

this era came during the period under the British control, wherein they brought with themselves, a revolution in terms of trade, technology, and lifestyle and not to mention, the political setting. eventually then maharaja made a treaty with the British stating that the British shall take control over the forest land of Kashmir state in lieu of Rs. 1 lakh per annum.

Influences

the popularity of the place in due course of time were enhanced by two main forces: one that it was a princely state and second, its scenic beauty. it had also become recognized due to the presence of tourist spots in its vicinity that included Sarahan, Kin-naur and Shikla.

the type face of architecture in the region has changed from being completely vernacular to being contemporary.

Rampur has now developed into a major commercial town, one of the most important 'tehsil' in the Shikla district.



Holy Kinner - Kailash
mountain

Political

it was during the reign of Maharaja Padam Singh that the development was actually carried out.

till date the contestants from district are the members of the same dynasty, who are involved with bringing up their province commercially and economically.

present maharaj of Kashmir state is Raja Vir Bhadra Singh who is also the chief minister of Jammu and Kashmir for five consecutive terms and Rani Pratibha Singh who is also notable politician of the state and MP from Mandi (h.p).

the presence of Rampur Kashmir hotel and a mini-secretariat is attributed to this.



Socio-economic aspects

the major factor enhancing the economy of the place is the hydro electric project which has brought in technology and urbanism in and around Rampur.

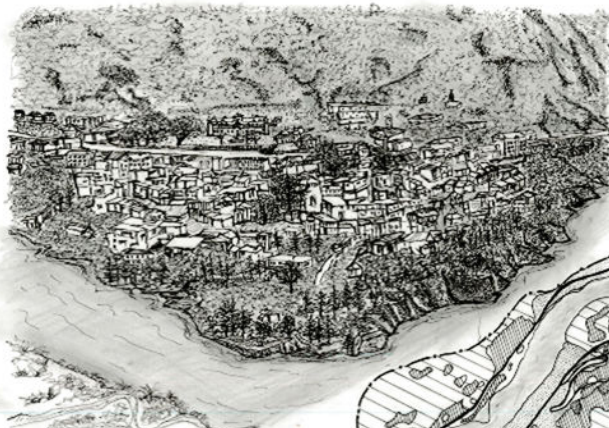
another major factor boosting the economy is tourism, which is majorly becoming an industry that requires proper maintenance of its historical background.

as mentioned before, optimum opportunities have been created around by urban development authorities that allows people to have a fair standard of living with holding on to their cultural values.



Main dam of S.T.V.N.L.
at Jhakri

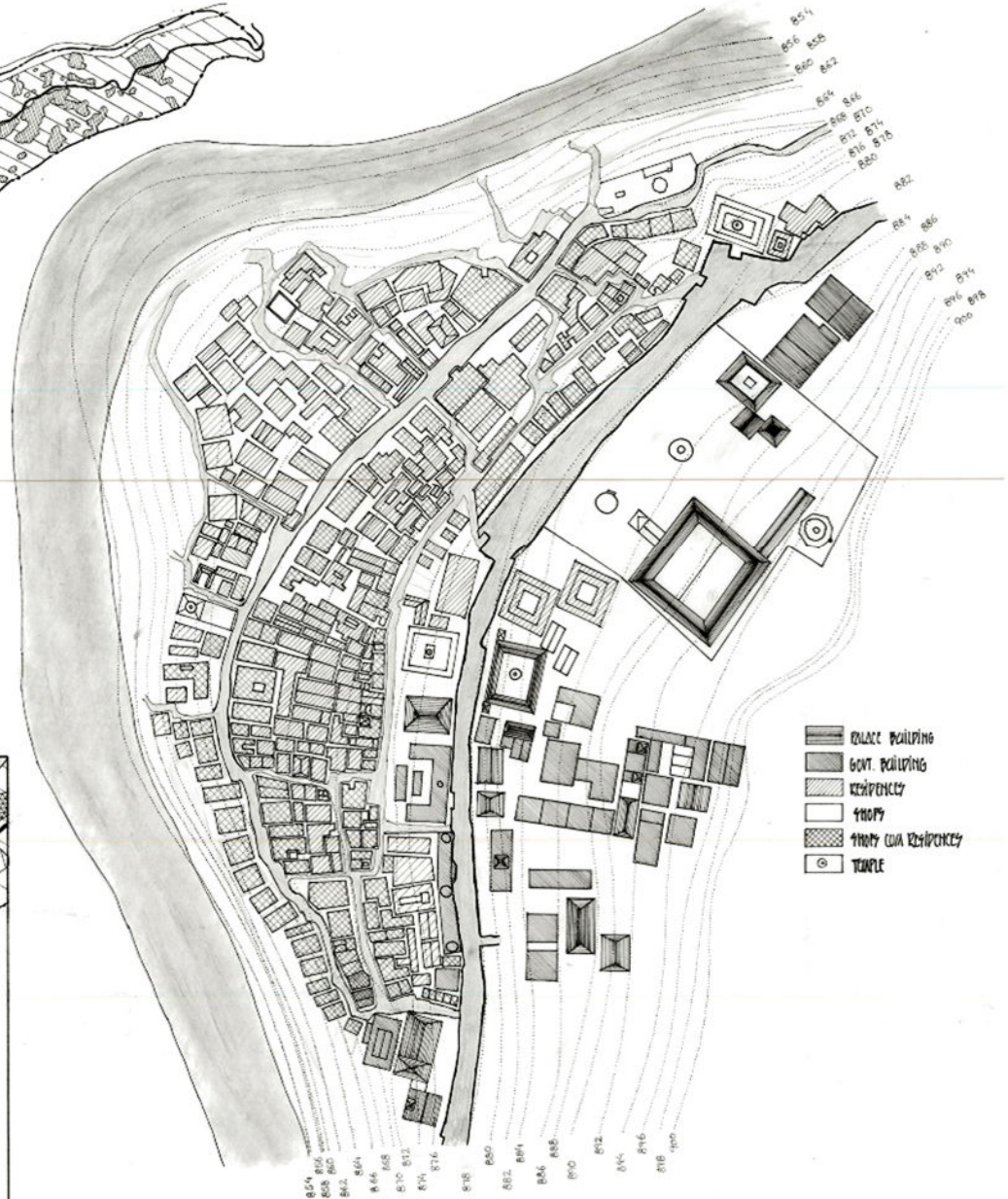
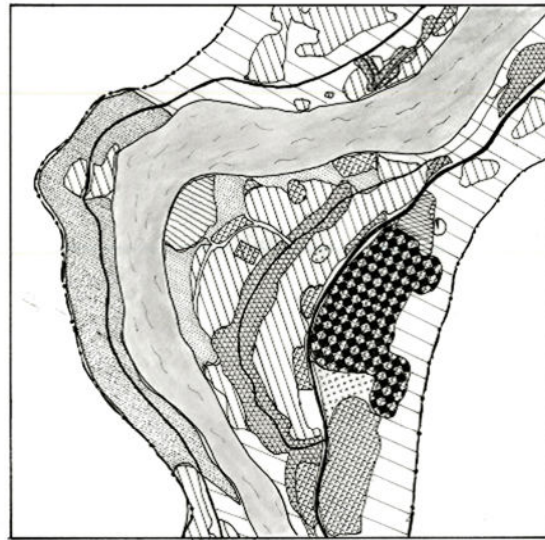
view of rampur kushhar



Legends (in Hec.)

- TRAFFIC & TRANSPORTATION (42.00)
- COMMERCIAL USE (8.42)
- PALACE AREA (0.51)
- PARKS & OPEN SPACES (0.81)
- AGRICULTURE/GRASSLAND/TORRENT (317.46)
- EROSION CONTROL/CEMETERY
- ROAD
- RESIDENTIAL USE (52.61)
- STEP / RUP LAND
- INDUSTRY & SERVICES (4.21)
- GOVT. & SEMI-GOVT. USE
- UNDESIRABLE BOUNDARY
- WATER (54.00)

rampur planning
area
(existing land use)



- PALACE BUILDING
- GOVT. BUILDING
- RESIDENCE
- GROUP
- GROUP WITH RESIDENCES
- TEMPLE

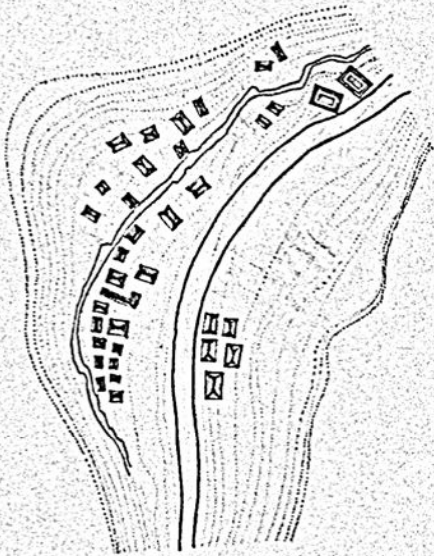
rampur kasha kazar (study area)

Sheet No. 07



morphology

Rampur 1550:



Rampur was established by king BAMZIN

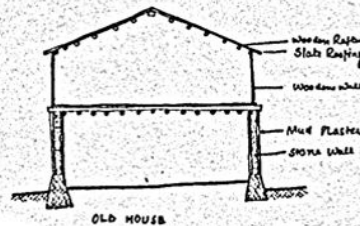
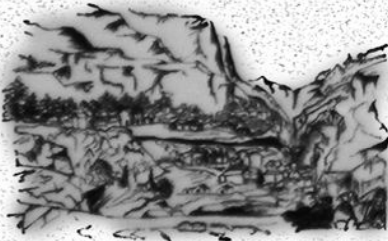
in the beginning of settlement traders and other craftsmen migrated from other village of the town and settled there

it gave the importance of commercial centre to the town

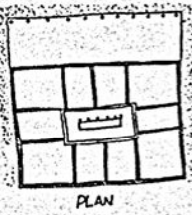
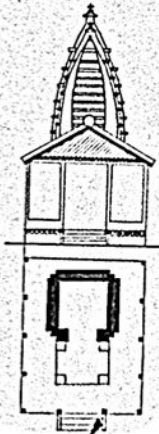
as the palace was built on the top of hill and rest of the population settled near the satlaj river

as population started increasing, it resulted into the clustered settlement style of house differ according to the status of owner

Raja has chok style of house and rest of the population has normal style of house with sloping roof single storeyed stone walls and wooden doors and windows

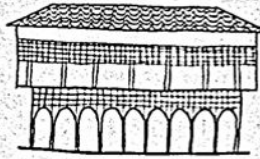


OLD HOUSE



PLAN

Choki style house.



ELEVATION



it resulted in more houses single storeyed as well as G+1 of some palani architectural style, projected verandah on first floor supported by wooden columns

then people started moving towards satlaj river and constructed shops as well as public spaces

Rampur 1925:

this was the period when most of the construction was done in town

raja padam singh had good relation with britishers which flourished the trade

many administrative buildings were constructed eg. s.d.m office and primary schools were also opened

with the passage of time population increased to 50,000

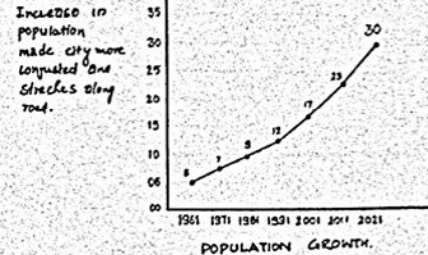
Rampur 2001

present raja, RANA VIKRAMADITYA SINGH who was elected as cm. of the state for six times

these days new construction is being done with modern building materials and techniques

old buildings are being demolished and govt. as well as private sectors are constructing new multistoreyed building with modern techniques

settlement has moved more towards to river bank and now the settlement is very compact



Natural and physical form of settlement

it is a linear development along the road nh-22
all public buildings are along the roadside
site is surrounded by steep cliffs on one side and satluj river on the other

Urban aesthetics

zoning:
proper hierarchy of spaces is created
palace is situated on the top of the valley

all public buildings and public spaces are easily accessible by roads

kasba bazar is main market area for all the nearest 30-50 km. area

residential zone and commercial zone are below the road nh-22

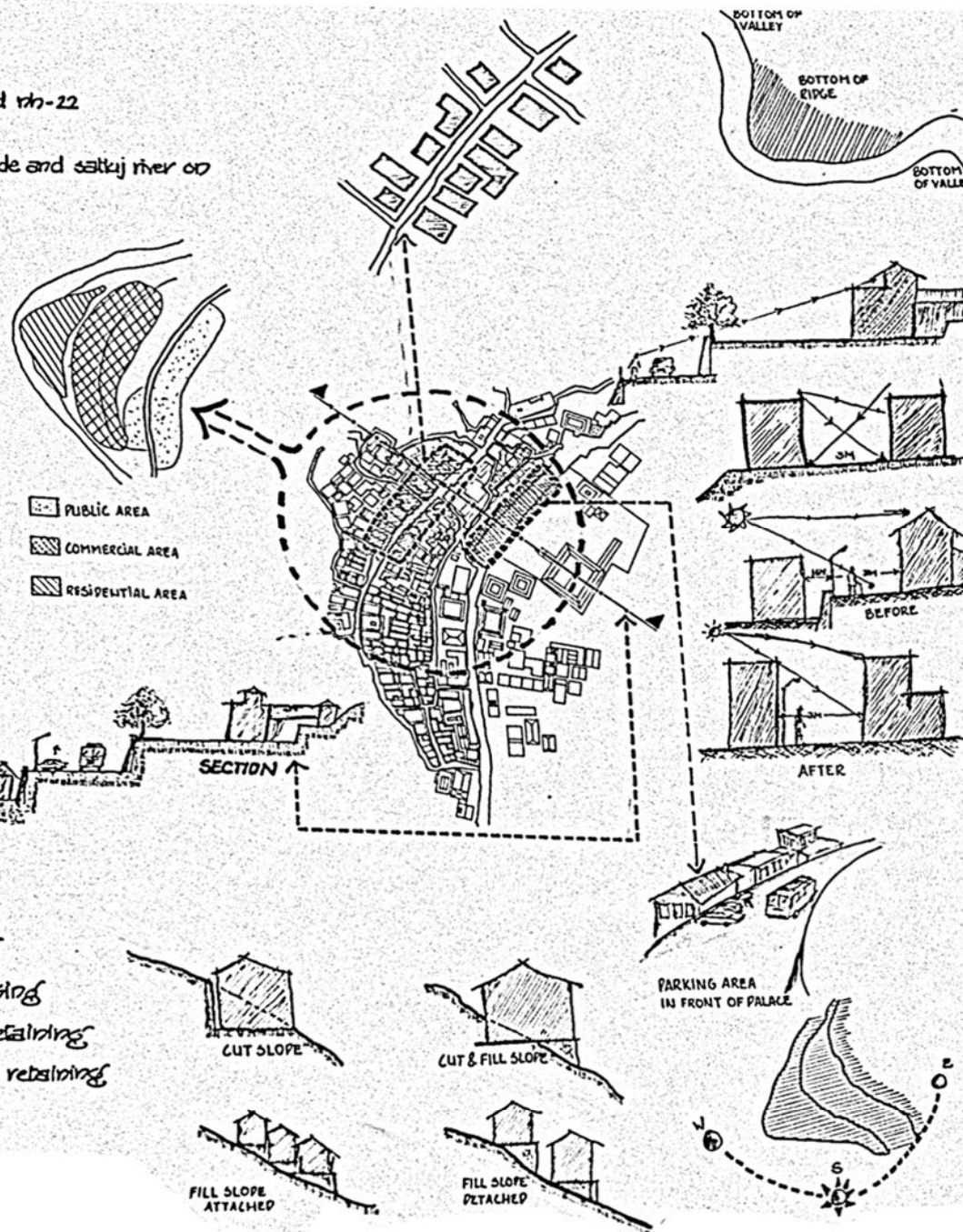
Open spaces for housing

as the site is contoured, therefore all the structures are along the slope
as it is a commercial town which leads to the compact settlement and less open spaces

Urban landscape

city has a height difference of 520m from river bank to the palace area

all the structures are constructed using retaining walls
all the houses constructed using retaining walls
the different ways of construction of retaining wall are:



Topography of settlement

the kasba bazar area is situated on the bottom ridge of the valley because of this probability of landslide is minimum

the natural drainage system is along the slope

Scale of building

padam palace has a monumental scale because of the large space because of that ahead of the building

public buildings such as the s.d.m. building have been given a human scale which is also accentuated by providing a relatively smaller open space in front

the common building of rampur for eg. residences are built on either or both sides of 3-4 mt. wide roads which appeared proportionate till the time they were single or double storied.

now, that their height has increased due to the addition of number of floors they appear all the more disproportionate and hence the roads appear very narrow

Parking

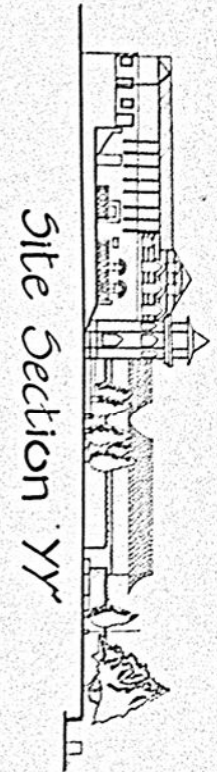
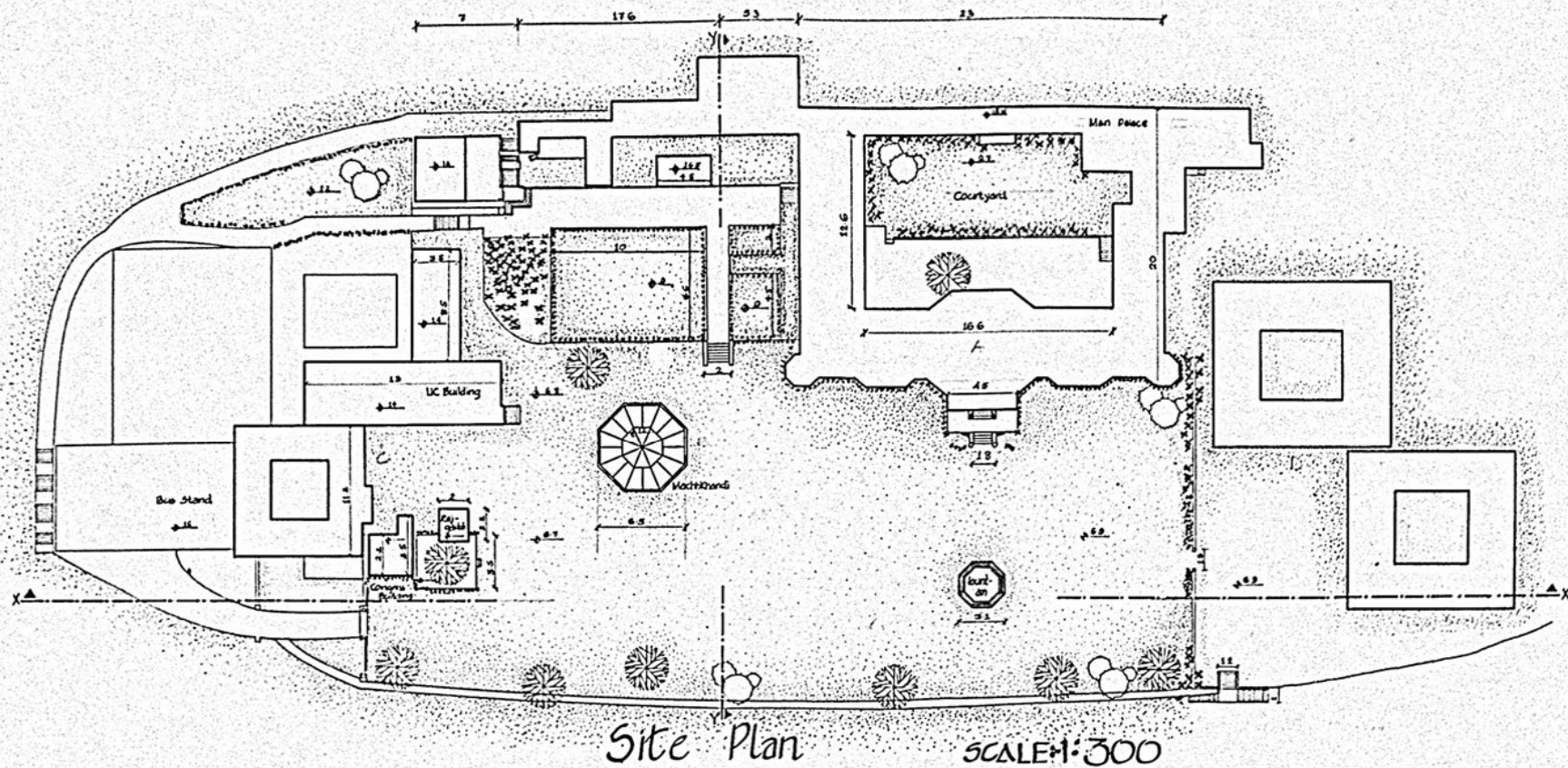
the parking is spread all along the nh-22 highway

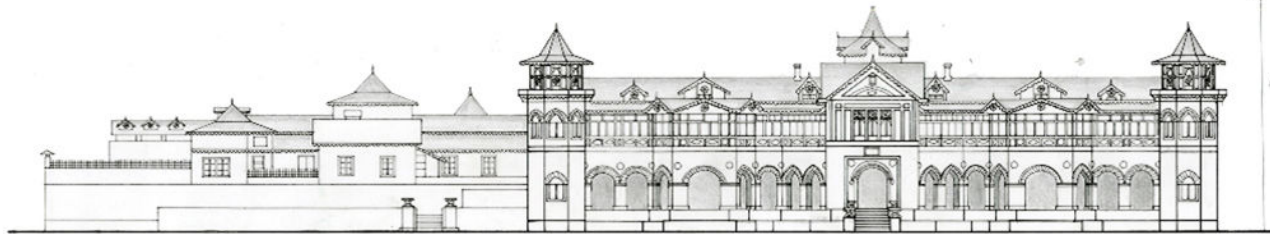
the main parking is provided in front of padam palace and mini-secretariat

Orientation of settlement

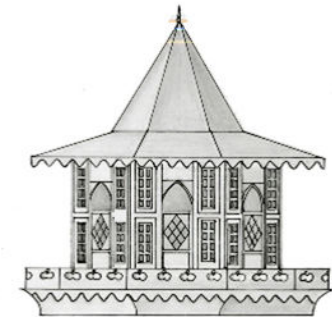
the settlement run from north-west to the south-east.

the lighting of the city was inadequate being a contoured site, and the present conditions natural light is not harnessed

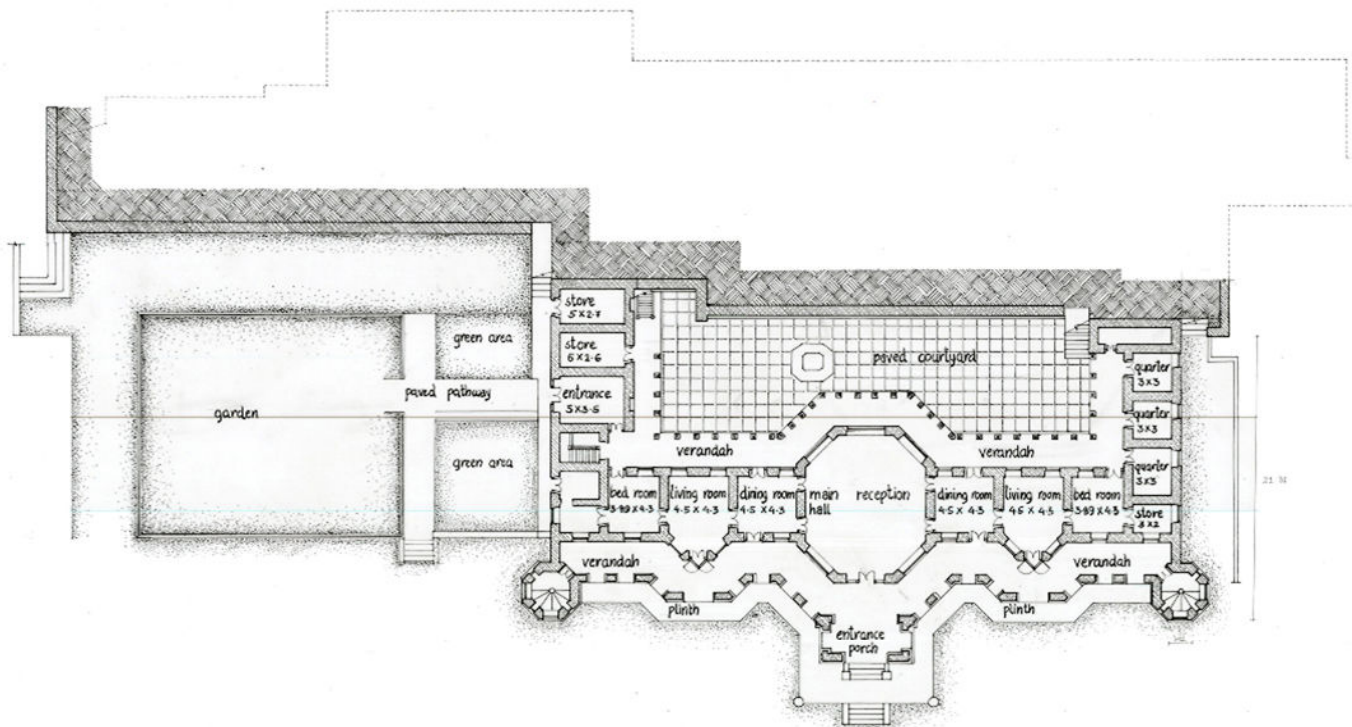




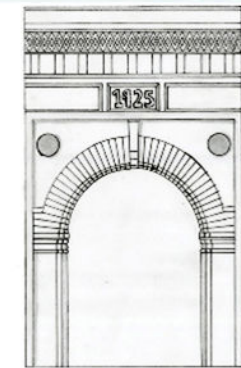
Front Elevation (scale 1:200)



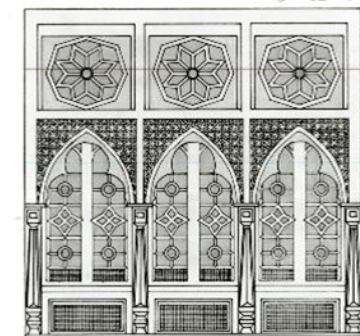
Intricate Wooden Carving At The Top Of The Tower



Plan at 3M level (scale: 1:200)

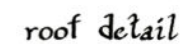
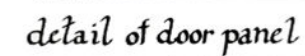
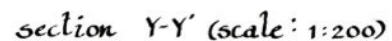


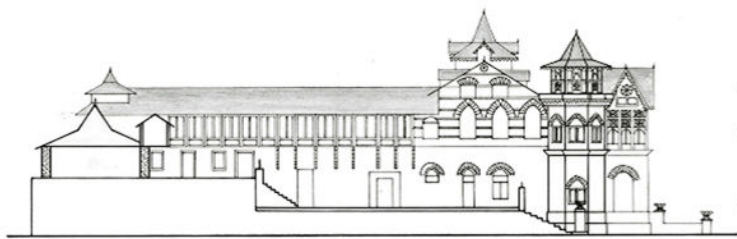
Main Entrance Arch Carved Out Of Locally Available Material



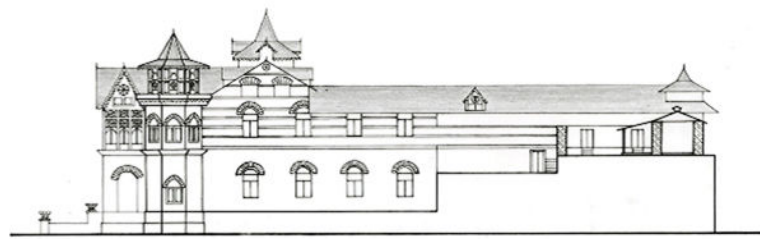
Coloured Glass Window Facing The Internal Courtyard



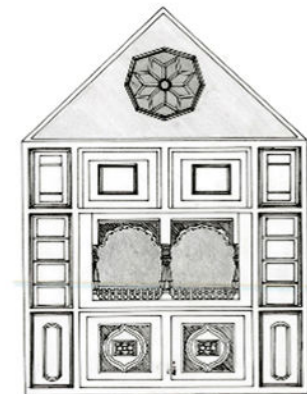




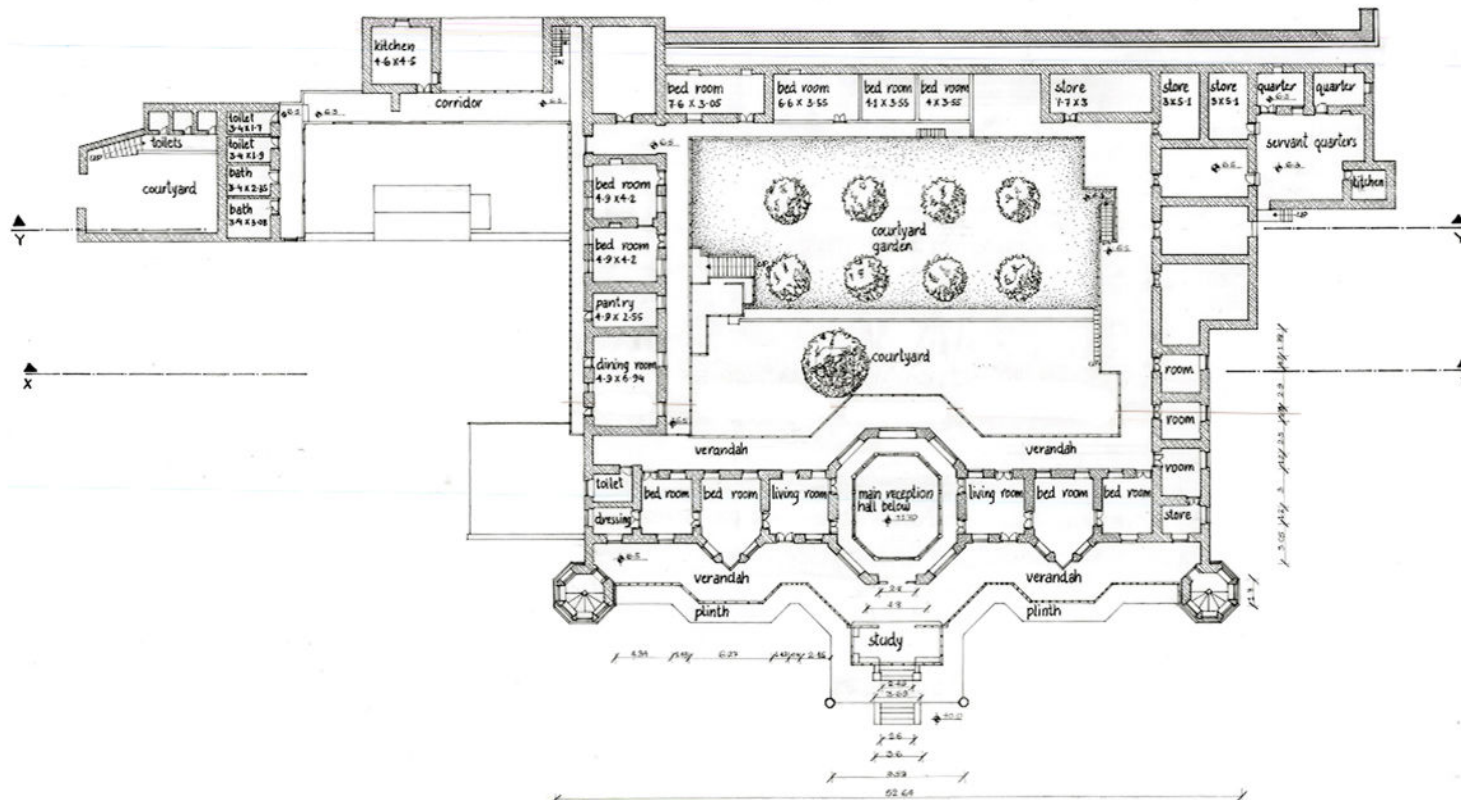
left side elevation (scale : 1:200)



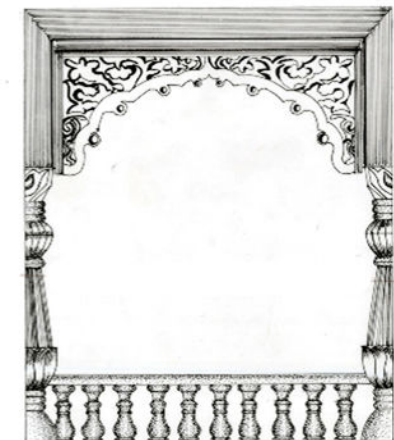
right side elevation (scale : 1:200)



detail of window at the front wall

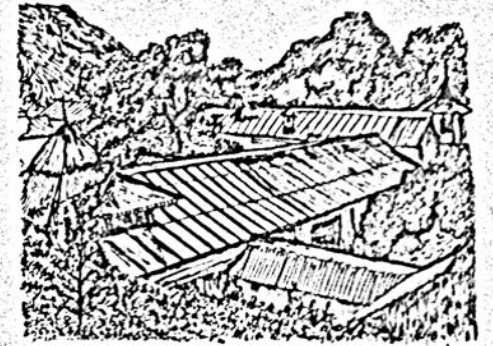
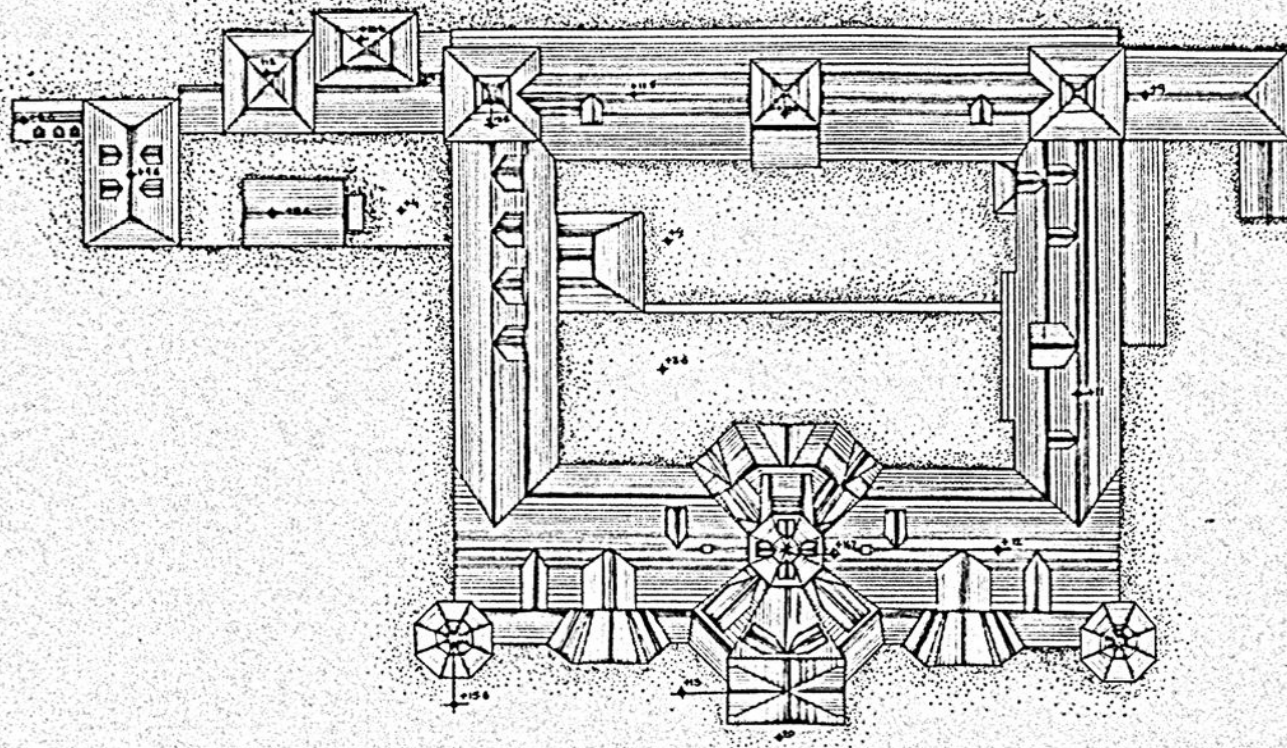


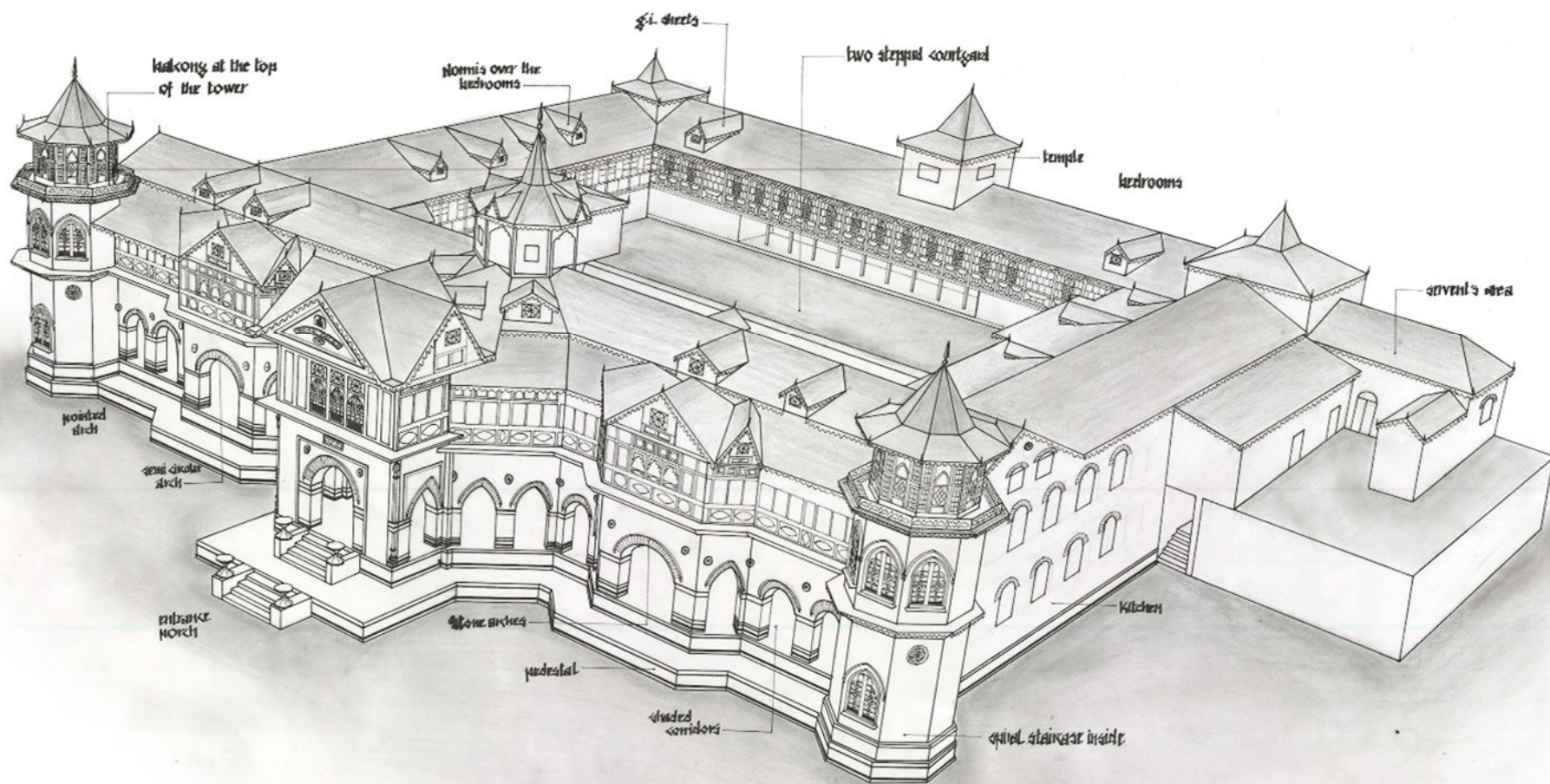
Plan at 7.5M level (scale : 1:200)

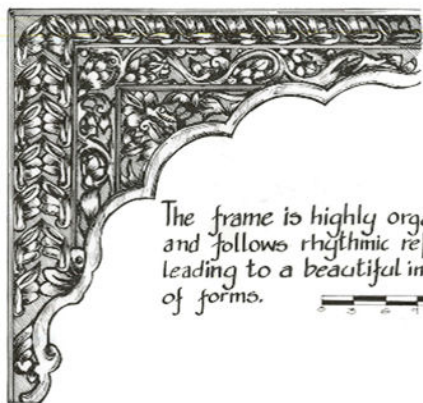


detail of jarokha opening

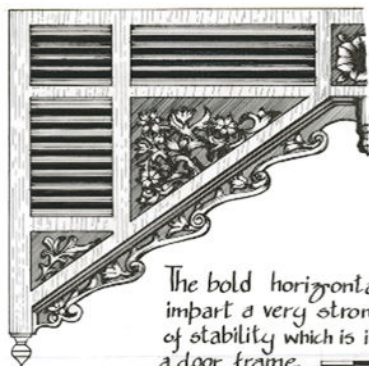








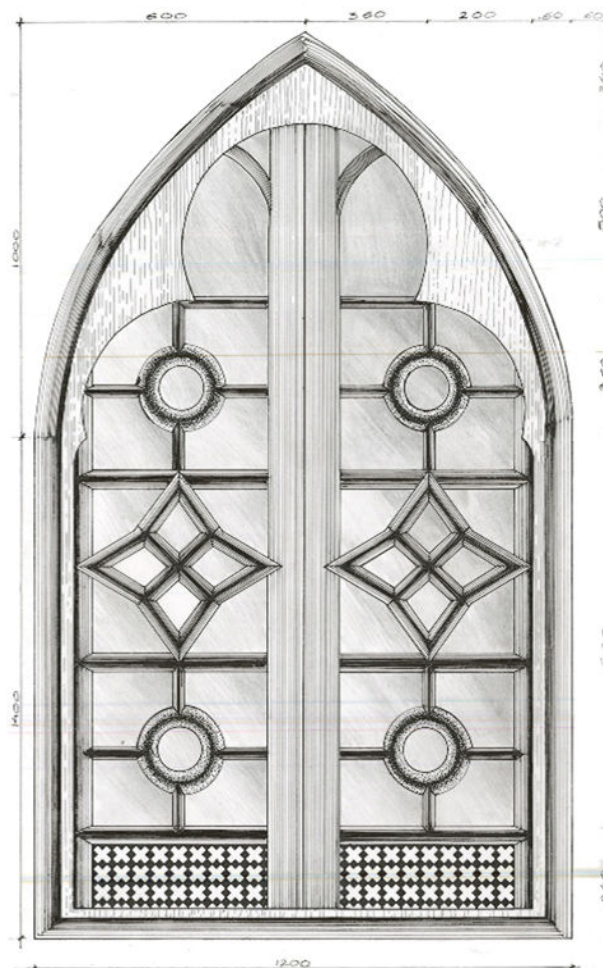
The frame is highly organic and follows rhythmic repetition leading to a beautiful interplay of forms.



The bold horizontal lines impart a very strong sense of stability which is ideal for a door frame.



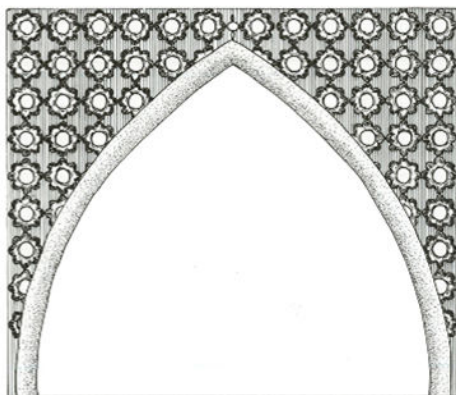
The organic motifs are arranged in symmetry and proportion satisfying principles of design.



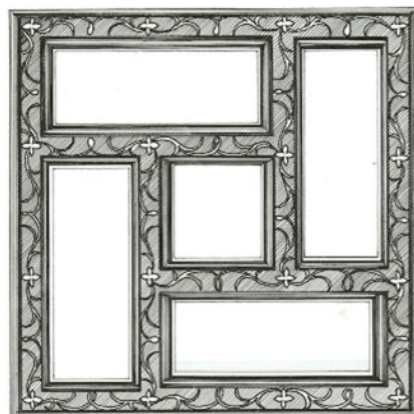
Use of geometric forms is very evident in the window. Bold straight lines blend with organic curves balance the whole detail.



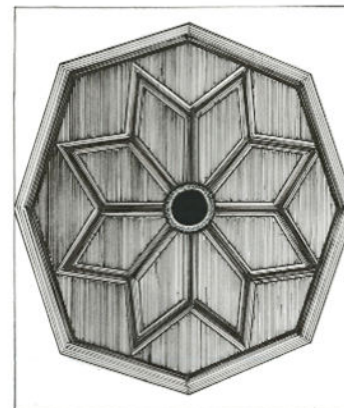
The door has harmonic play of geometry and form. Rhythm, balance and repetition are evident in the whole form.



Pointed arch over window



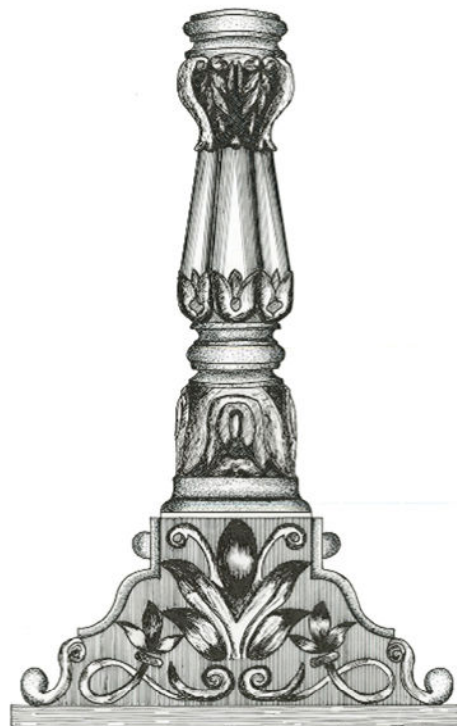
Panel below external window



Octagonal detail of dormer



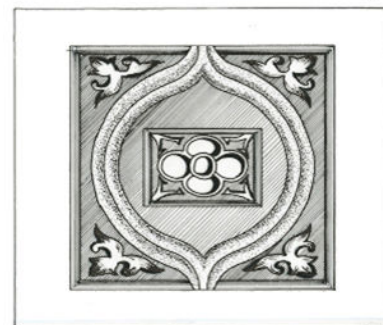
Ornamentation over door frame



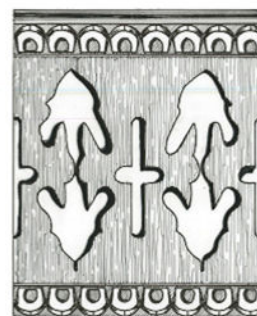
Decorative column base to support interiors



Railing details of the gallery overlooking internal hall



Decorative panel below internal window

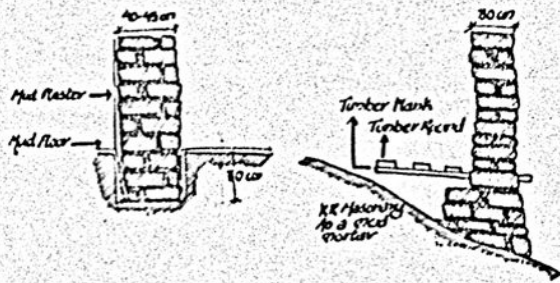


Ornamental internal window



Column supporting interiors

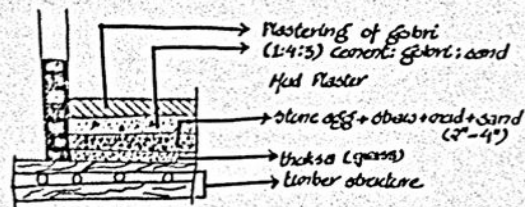




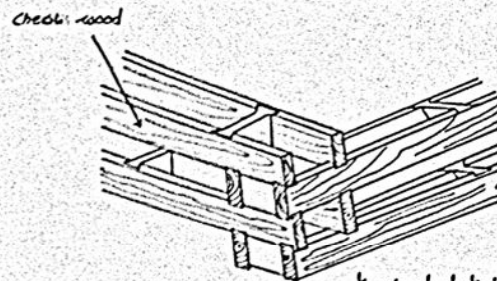
Typical random rubble foundation

mud and stone are the most commonly used material for foundation. the mud wall were made due to their good insulation properties and also excellent binding property of mud.

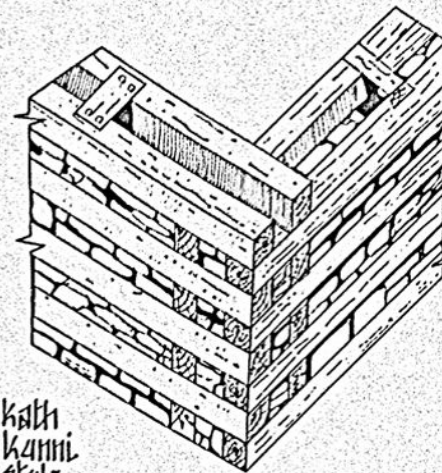
- mostly used material for building
- decayed wood - insect proof, 100 year life span
- pine wood
- stone (sandstone) or rock
- mud mortar - insulating, binding property
- clay for roofing



Flooring / Plastering

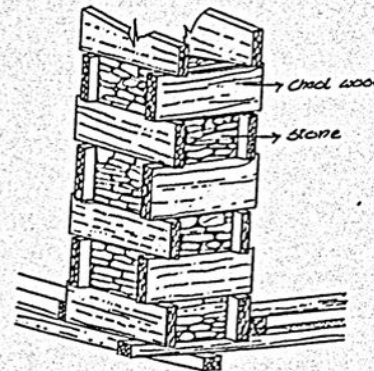


Typical detail
Kath Kunni style



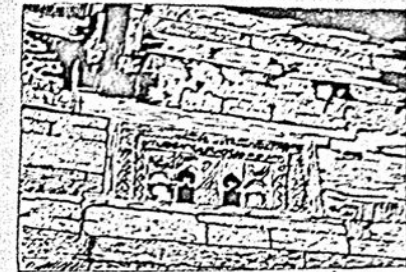
Kath Kunni style

Wall in stone and wood (locally known as chalk) wooden beams 30 cm or so in depth extending across the entire length of wall. In filling with layer of stone in between wooden beams. beam of each wall rest on the beam of wall at right angle to them, dovetail joint in between two beams to prevent them buckling them out with pressure of stone



Parque type pillar construction

In old building and other place in interior where the use of wood is required to be curtailed, the Kath Kunni technique is slightly modified by replacing the square cut massive wooden plank placed on edge, so that a box like space is formed within. the space in them filled with the hand packed stone, this technique is called Parque



Alternate layer of wooden beam and stone window with wooden lintel and sill picked in wooden and stone faced wall



Gable roof rectangularly laid out single storey house in rampur region covered with gable roof



Kath Kunni wall of castle temple of Sahil



View of the Kasba Bazaar from the Cliff



S.D.M. Complex and Government Residences



Along the road Police Station



Painting of Rampur by James Baillie Fraser ,1820



View of the Palace from the Cliff



Padam Palace Record Office





Front View of Padam Palace



View of Palace from the Cliff



Machkandi



Octagonal Staircase Tower



View of Palace from Machkandi





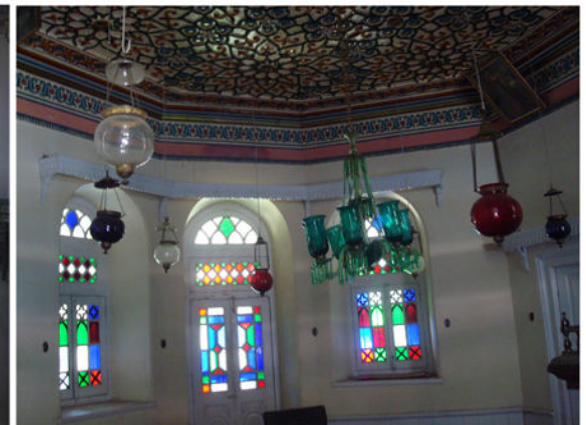
Living Room on First Floor



'Praor' Pahadi Entrance



Main Central Hall



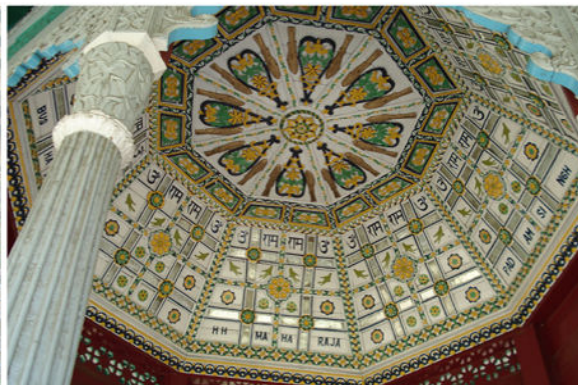
Ceiling Lights and Chandelier



Dormer Window



Concentric Columns in Machkandi



Machkandi Ceiling



Service Corridors



Bedroom Door



Bedroom



Stained Glass Windows



Back Portion Elevation from Courtyard



Courtyard Window Arrangement

